

The invention claimed is:

1. In a spring loaded retractable needle syringe having a body and a plunger the improvement comprising a central tube disposed within the body to contain the needle and spring from which the needle is exposed by a first depression of the plunger and then into which the needle is retracted by a second aggressive depression of the plunger after use.

2. A spring loaded retractable needle syringe comprising a body, a central tube coaxially mounted within said body, a needle carrier and needle slidably mounted within said central tube, a spring mounted within said central tube to bias said needle carrier and needle into said central tube, means for sliding said needle carrier and needle within said central tube to compress said spring and expose said needle, means for retaining said needle carrier and needle in the exposed position against the biasing force of said spring, and means for releasing the needle carrier and needle such that said needle carrier and needle are retracted into said central tube.

3. The spring loaded retractable needle syringe according to claim 1 further comprising a safety cap adapted to fit over the open end of said body after said needle carrier and needle has been retracted.

4. A spring loaded retractable needle syringe comprising:

- (a) a body having a proximal end and a distal end;
- (b) central tube coaxially mounted within said body, said central tube having a proximal end and a distal end and a central tube aperture through the wall at the distal end;
- (c) a hollow slidable plunger mounted through said proximal end and in sealing engagement with the inner wall of said body and the outer wall of said central tube;

(d) a needle carrier and needle slidably mounted within said central tube, said needle carrier having a proximal end and a distal end;

(e) a spring mounted within said central tube at the distal end to bias said needle carrier and needle within said central tube;

(f) a needle carrier retainer snap mounted on the proximal end of said needle carrier;

(g) a needle carrier retainer notch mounted on said central tube engageable with said needle carrier retainer snap when said needle is exposed through the distal end of said body to retain said needle carrier and needle in the exposed position;

(h) a needle carrier flow aperture through said needle carrier to the proximal end of said needle within said needle carrier, said needle carrier flow aperture alignable with said center tube aperture when said needle is in the exposed position;

(i) a needle carrier actuator mounted on the distal end of said plunger;

(j) a needle release notch mounted near the proximal end of said center tube;

(k) a release cone mounted on the proximal of said center tube engageable; and

(l) a needle carrier retainer release latch mounted on the distal of said plunger engageable with said release cone to be spread apart and release the needle carrier from its exposed position and retract the needle carrier into the plunger and the needle into the center tube.

5. The spring loaded retractable needle syringe according to claim 4 further comprising a safety cap adapted to fit over the open distal end of said body after said needle carrier and needle has been retracted.

6. The spring loaded retractable needle syringe according to claim 4 wherein said

spring is isolated from the fluid to be injected.